

DIRECT TESTIMONY OF

THERESE A. GRIFFIN

ON BEHALF OF

DOMINION ENERGY SOUTH CAROLINA, INC.

DOCKET NO. 2019-239-E

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND POSITION.

A. My name is Therese A. Griffin, and my business address is 220 Operation Way, Cayce, South Carolina. I am the Manager of Energy Efficiency and Demand Management for Dominion Energy South Carolina, Inc. ("DESC" or the "Company").¹

Q. DESCRIBE YOUR EDUCATIONAL BACKGROUND AND BUSINESS EXPERIENCE.

A. I have a bachelor's degree in journalism from the University of South Carolina. I began working for the Company in 1994 as a communications strategist and have worked in various roles since then, managing marketing and corporate communications, advertising, online communications, corporate design and printing services functional areas. I have also been responsible for philanthropy, which included identifying strategic opportunities to partner with nonprofit organizations for Company grants and employee volunteer opportunities. In 2013, I joined the Company's newly formed renewable energy department. In 2014, I

¹ South Carolina Electric & Gas Company ("SCE&G") changed its name to Dominion Energy South Carolina in April 2019, as a result of the acquisition of SCANA Corporation by Dominion Energy, Inc. For consistency, I use "DESC" to refer to the Company both before and after this name change.

1 assumed responsibility as Manager of Energy Efficiency and Demand
2 Management.

3 **Q. WHAT ARE YOUR DUTIES WITH DESC?**

4 A. Currently, as Manager of Energy Efficiency and Demand Management, I
5 lead planning and implementation of the Company's residential, commercial and
6 industrial energy efficiency programs, which constitute Demand-Side Management
7 ("DSM") programs as that term is used in the statute that governs DSM programs,
8 S.C. Code Ann. § 58-37-10. I am also responsible for integrating the Company's
9 energy efficiency efforts with its renewable energy programs and customer
10 assistance department.

11 **Q. ARE YOU A MEMBER OF ANY PROFESSIONAL ORGANIZATIONS?**

12 A. Yes. I currently serve on the board of directors and executive committee of
13 the Southeast Energy Efficiency Alliance ("SEEA"). SEEA promotes energy
14 efficiency as a catalyst for economic growth, workforce development and energy
15 security across the Southeast. I am also a member of the Association of Energy
16 Services Professionals, the American Association of Blacks in Energy, and have
17 lifetime membership with the International Association of Business
18 Communicators, where I served as president of the South Carolina Chapter and a
19 regional board member.

20 **Q. HAVE YOU EVER TESTIFIED BEFORE THIS COMMISSION?**

21 A. No. This will be the first time I testify before the Public Service
22 Commission of South Carolina (the "Commission").

23 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

1 A. My testimony provides an overview of DESC's current suite of DSM
2 programs and explains how they have evolved since they were launched in 2010. I
3 will discuss the results achieved under these programs and explain why
4 modifications and expansions are needed for these programs to continue to operate
5 successfully and to provide benefits to our customers and our system. In addition,
6 my testimony describes the process we used beginning in 2017 to obtain
7 stakeholder and public interest input into the design of the programs proposed here.
8 My testimony also explains the key features of the programs that DESC is asking
9 the Commission to approve in this proceeding and requests their approval.

10 **THE HISTORY AND STRUCTURE OF DESC'S CURRENT DSM PROGRAMS**

11 **Q. WHAT IS THE ORIGIN OF DESC'S CURRENT SUITE OF DSM**
12 **PROGRAMS?**

13 A. In 2008, DESC hired ICF International, Inc. ("ICF") to design a suite of
14 DSM programs for the Company to offer to its customers. DESC chose ICF
15 because of its demonstrated expertise and standing as a nationally recognized firm
16 specializing in DSM and energy efficiency projects.

17 In Docket No. 2009-261-E, DESC presented the Commission with a
18 proposed suite of seven residential and two commercial and industrial DSM
19 programs. The Commission approved those programs in Order No. 2010-472 and
20 authorized the Company to establish a rate rider (the "Rate Rider") to recover
21 program costs and net lost revenues as well as an incentive based on the level of
22 customer benefits provided. The Rate Rider was approved under the terms of S.C.
23 Code Ann. § 58-37-20, which states that the rate provisions of DSM programs

1 should be sufficient to make investment in the DSM programs at least as attractive
2 to the utility as an investment in new generating facilities.

3 **Q. WHAT ONGOING REVIEW AND UPDATING OF DSM PROGRAMS AND**
4 **THE RATE RIDER DID ORDER NO. 2010-472 REQUIRE?**

5 A. Order No. 2010-472 required DESC to make filings each January informing
6 the Commission of changes in the DSM programs and updating the Rate Rider
7 using current information about program costs, lost revenues and customer benefits.
8 The Order established the review period for each annual filing as the twelve months
9 ending each November 30th. The Order provided that the updated Rate Rider would
10 go into effect on the first billing cycle of May.

11 **Q. DID ORDER NO. 2010-472 REQUIRE THE COMPANY TO CONTRACT**
12 **FOR THIRD-PARTY EVALUATION, MEASUREMENT AND**
13 **VERIFICATION OF DESC’S DSM PORTFOLIO OF PROGRAMS?**

14 A. Yes. Order No. 2010-472 required the Company to prepare an Evaluation,
15 Measurement and Verification (“EM&V”) plan providing for annual third-party
16 verification of program costs and benefits using industry-accepted evaluation
17 protocols and submit it for Office of Regulatory Staff (“ORS”) and stakeholder
18 review. DESC selected Opinion Dynamics Corporation (“ODC”) as the third-party
19 EM&V contractor. Since that time, ODC has conducted eight annual EM&V
20 reviews, which have been provided to the ORS and other interested parties and filed
21 with the Commission.

1 **Q. WHAT PROVISIONS DID ORDER NO. 2010-472 CONTAIN**
 2 **CONCERNING STAKEHOLDER INPUT AND REVIEW OF DSM**
 3 **PROGRAMS?**

4 A. Order No. 2010-472 provided for the creation of an advisory group of
 5 stakeholders (the “Advisory Group”) to meet at least twice a year to review program
 6 results and make recommendations to DESC concerning “efficiency potential
 7 studies, new program ideas, modifications to existing programs, outreach and
 8 education programs and funding, and EM&V plans.” Order No. 2010-472 at 17.

9 **Q. WHO ARE THE CURRENT MEMBERS OF THE ADVISORY GROUP?**

10 A. The Advisory Group currently consists of these members:

- 11 • ORS – representing all customers and the public interest
- 12 • State Energy Office of ORS – representing the state and public interest
- 13 • South Carolina Office of Economic Opportunity – representing the low-
- 14 income interest
- 15 • South Carolina Energy Users Committee – representing the industrial
- 16 sector
- 17 • South Carolina Small Business Chamber of Commerce – representing
- 18 the commercial sector
- 19 • South Carolina Coastal Conservation League (“SCCCL”) –
- 20 representing environmental interests
- 21 • Southern Alliance for Clean Energy (“SACE”) – representing
- 22 environmental interests
- 23

24 **Q. HOW MANY TIMES HAS THE ADVISORY GROUP MET?**

25 A. The current Advisory Group has met fourteen times in the last five years,
 26 and DESC has provided information and solicited comments from members of the
 27 group between meetings. As discussed in more detail below, the Advisory Group
 28 has been involved in each step of the preparation of the suite of modified and
 29 expanded DSM programs proposed here.

1 **Q. DOES ORDER NO. 2010-472 ALLOW THE COMPANY TO MAKE**
2 **CHANGES TO DSM PROGRAMS BETWEEN ANNUAL REVIEWS?**

3 A. Yes. Order No. 2010-472, and its successor order, Order No. 2013-826,
4 allow the Company to make changes in DSM programs in response to evolving
5 market conditions and information. Those changes may be made outside of annual
6 reviews or other proceedings and must be reported to the Commission and to ORS
7 in each annual DSM update filing. DESC has used this authority to modify or
8 expand programs and to modify or discontinue unsuccessful programs whose
9 benefits, as measured by EM&V reviews, did not justify their continued costs.
10 Examples include increasing Heating and Cooling program rebate amounts, the
11 addition of a mobile home weatherization component to the existing Neighborhood
12 Energy Efficiency program (“NEEP”), moving from CFL to LED bulbs across all
13 the residential programs and adding water conservation measures to the Home
14 Energy Check-up program, NEEP and the EnergyWise Savings Store.

15 **Q. WHAT TIME LIMIT DID ORDER NO. 2010-472 IMPOSE ON ITS**
16 **AUTHORIZATION OF RECOVERY FOR PROGRAM COSTS?**

17 A. Order No. 2010-472 provided that the use of the Rate Rider for the recovery
18 of future program costs, lost revenue and incentives associated program costs
19 would have to be reauthorized after Program Year (“PY”) 3.

20 **Q. WHAT WAS DONE TO AUTHORIZE CONTINUATION OF THE RATE**
21 **RIDER?**

22 A. As the end of the three-year period approached, the Company filed a petition
23 requesting an order extending the Rate Rider and approving a revised suite of nine

1 residential and two commercial programs. In Order No. 2013-826, the Commission
2 granted this request, made certain modifications to the Rate Rider, and authorized
3 continued collection of program costs, lost revenues, and incentives through it.

4 **Q. DID ORDER NO. 2013-826 LIMIT PETITIONS TO CHANGE THE DSM**
5 **PROGRAM?**

6 A. Yes. To provide stability in the implementation of the DSM plan approved
7 in Order No. 2013-826, the Commission precluded parties from filing petitions for
8 changes in that plan for six years from the date of the Order.

9 **Q. DID THE COMMISSION CONTINUE DESC AUTHORIZATION TO**
10 **MAKE CHANGES IN THE DSM PLAN DURING THAT PERIOD?**

11 A. It did. The Commission reaffirmed the Company's authorization to make
12 changes in its DSM program based on current market conditions and information.

13 **Q. WHEN DOES THAT SIX-YEAR PERIOD END?**

14 A. The six-year period ends on November 26, 2019.

15 **Q. WHY DID DESC FILE THE CURRENT REQUEST ON JUNE 28, 2019?**

16 A. Filing the current request before December 1, 2019, is consistent with
17 DESC's authority to make changes in its DSM programs during the six-year period
18 and was necessary for the orderly and efficient administration of the DSM portfolio.
19 Also, as PY10 begins on December 1, 2019, it would be impractical to wait until
20 the end of PY9, or November 30, 2019, to bring the revised DSM programs and
21 Rate Rider requests before the Commission. For these reasons, and to the extent
22 such a waiver of the timing requirement for filing the current request is required,
23 the Company requests that the Commission grant one.

OVERVIEW OF THE CURRENT SUITE OF DSM PROGRAMS

Q. WHAT DSM PROGRAMS ARE CURRENTLY IN EFFECT?

A. As indicated above, when it reauthorized the Rate Rider in 2013, the Commission approved a suite of eleven DSM programs. In subsequent annual review dockets, specifically in Order No. 2014-381, the Commission approved the elimination of two of the programs that failed to meet cost effectiveness. Those programs were the Energy Information Displays program and the Home Performance with ENERGY STAR program. Order No. 2014-381 at 4. Additionally, the ENERGY STAR lighting program was transitioned to the Residential EnergyWise Savings Store (Online Store) in September 2015 following an ORS recommendation to modify the program to help ensure that incentives are being used for the benefit of SCE&G customers only. As such, the Online Store requires customers to provide account information when ordering bulbs or other measures. The ENERGY STAR New Homes program was discontinued in December 2015 following an EM&V recommendation from ODC that the incentives provided were not influencing builders. This resulted in the suite of six residential and two commercial and industrial programs that are in effect today.

The residential programs are:

- Residential Appliance Recycling
- Residential Heating & Cooling
- Residential Home Energy Check-Up
- Residential Home Energy Reports
- Residential Neighborhood Energy Efficiency
- Residential EnergyWise Savings Store (Online Store)

The commercial and industrial programs are:

- EnergyWise for Your Business

- Commercial Small Business Direct Install

Q. HAVE DESC'S DSM PROGRAMS TO DATE BEEN SUCCESSFUL?

A. Yes, since 2010, DESC's DSM programs have engaged more than 145,000 customers, including 11,696 low-income customers and 7,055 business customers. These customer counts do not include the purchasers of high efficiency bulbs sold through retail stores at incentivized prices. All told, approximately 7.7 million high efficiency light bulbs have been provided or installed. Incentives have been provided for the installation of over 48,000 high efficiency heat pumps, central air conditioning units, water heaters and/or duct work improvements and replacements. More than 21,000 Home Energy Check-ups were completed, and more than 10,000 refrigerators and freezers were removed from the grid through the Appliance Recycling program.

As measured against the Total Resource Cost ("TRC") test, DESC's overall DSM portfolio has remained cost effective since its inception. As shown in Table 1, since PY3, the overall DSM portfolio has had a TRC value over 2.0, which means that the net benefits of the programs outweigh program expenses by a factor of two or more.

Table 1. DSM Portfolio Cost Effectiveness

DSM Portfolio Cost Effectiveness (TRC)						
<u>PY1</u>	<u>PY2</u>	<u>PY3</u>	<u>PY4</u>	<u>PY5</u>	<u>PY6</u>	<u>PY7</u>
1.22	1.45	2.53	2.13	2.82	2.59	2.26

ADVISORY GROUP AND TRADE ALLY INPUT

Q. IN PREPARING THE SUITE OF PROGRAMS PROPOSED IN THIS DOCKET, WHAT DATA WAS COLLECTED, AND DID DESC SOLICIT INPUT FROM THE ADVISORY GROUP?

A. From the beginning of the planning process in late 2017, the Advisory Group has been engaged in reviewing, providing input and commenting on the DSM plan presented here. In its November 9, 2017 meeting, DESC informed the Advisory Group that comprehensive portfolio planning would begin in 2018 and solicited initial comments.

As a first step in the planning process, DESC commissioned ODC to gather additional DSM-related market data from DESC's residential and non-residential customer base. This data updated and expanded existing data sets that ODC had collected since 2010 as the third-party evaluator for the DSM portfolio. The study compiled a wealth of information regarding DESC customers in terms of the characteristics of the energy-using equipment in place, the likely turnover rate of that equipment, and the barriers and drivers to customer investment in energy efficient equipment. Focus was on residential and commercial customers from existing DESC data sources, such as program tracking databases, DESC comprehensive home audit data, the DESC service area Residential General Population Study, and primary data sources collected via nearly 400 residential telephone surveys, 157 residential on-site visits, 310 commercial telephone surveys, 45 commercial on-site interviews and two workshops with trade allies and market actors.

1 This data, as well as secondary data gathered by ICF, was provided as input
2 for the Potential Study. In the April 18, 2018 Advisory Group meeting, ODC
3 presented the Advisory Group with an overview of the market study, and DESC
4 shared the timeline for portfolio planning. DESC sought input from the Advisory
5 Group both during and following the meeting concerning the plan for data
6 collection and the timeline for completing the Potential Study and presenting the
7 results to the Commission.

8 During the August 16, 2018 meeting, ICF presented an overview of the
9 Potential Study process and deliverables to the Advisory Group. DESC sought
10 input on the process both during and following the meeting.

11 On November 15, 2018, DESC presented to the Advisory Group the full list
12 of measures that ICF had identified for inclusion in the Potential Study and asked
13 for the Advisory Group's review and input. The Advisory Group was also asked
14 to continue to review the measures list and provide further feedback following the
15 meeting. In light of comments from the Advisory Group, ICF ensured that the
16 measures list was comprehensive.

17 On April 25, 2019, ICF presented the preliminary results for the Potential
18 Study to the Advisory Group, including the estimated energy savings, program
19 expenses and expanded program scenarios. DESC also provided an updated
20 timeline and sought feedback on the measures, preliminary results and timeline
21 both during and following the meeting.

22 **Q. ARE THERE OTHER STAKEHOLDERS OR ORGANIZATIONS THAT**
23 **ARE IMPORTANT TO THE SUCCESS OF DSM PROJECTS?**

1 A. Yes, there are. Heating, ventilation and air conditioning (HVAC) and
2 lighting contractors and distributors, plumbers and other trade allies play an
3 important role in promoting and implementing certain DSM programs. These trade
4 allies represent a key source of information about customers' likelihood to
5 participate in specific programs and incentive levels as well as the practicality of
6 program design and the likelihood that trade allies will effectively promote specific
7 programs and measures. In many cases, trade allies are a direct link to the customer,
8 and their willingness to promote a program is critical to its success.

9 **Q. DOES DESC MAINTAIN ONGOING CONTACT AND INFORMATION**
10 **EXCHANGE WITH TRADE ALLIES?**

11 A. Yes, we maintain constant outreach with trade allies to promote our DSM
12 programs to them. We train trade ally personnel on the proper sizing and
13 installation of energy efficient equipment, on measures like duct sealing and
14 insulation, and on energy efficiency measures generally. DESC distributes an email
15 newsletter for its HVAC industry partners, holds training sessions throughout the
16 year at HVAC distributor facilities, and broadcasts informational webinars for trade
17 allies who support the EnergyWise for Your Business program.

18 **Q. DID DESC SOLICIT INPUT FROM TRADE ALLIES IN FORMULATING**
19 **THE DSM PROGRAMS PROPOSED IN THIS PROCEEDING?**

20 A. Yes, we did. On March 25, 2019, DESC held a trade ally workshop in
21 Cayce, South Carolina, where residential HVAC, plumbing and water heater
22 contractors met with DESC to provide input on programs related to HVAC
23 equipment, heat pump water heaters, duct repair and replacement, HVAC tune-ups,

1 and mid-stream/downstream delivery channel program design. The next day,
2 March 26, 2019, DESC held an equipment distributor workshop in Charleston,
3 South Carolina, where residential and commercial equipment distributors
4 representing lighting, food service, water heating and HVAC distributors provided
5 input on midstream/downstream delivery channel program design.

6 **THE PROPOSED SUITE OF DSM PROGRAMS**

7 **Q. IN WHAT WAYS WILL DESC ENCOURAGE PARTICIPATION IN THE**
8 **DSM PROGRAMS THAT ARE PROPOSED HEREIN?**

9 A. Overall, DESC's DSM programs have been quite effective in reaching
10 customers primarily through response to bill inserts, online advertising, direct mail
11 and DESC website content. Similarly, DESC's DSM programs have been effective
12 in accelerating the consumer transition to high efficiency CFLs and now LED
13 lighting while influencing the purchase of and promotion of higher efficiency
14 heating and cooling systems as well as recycling of inefficient refrigerators and
15 freezers, permanently removing them from the grid. Our current and past DSM
16 programs have produced good results given the market conditions and approaches
17 on which they were based.

18 But experience over the past eight years has shown that there are important
19 customer groups that are not easily reached through the standard DSM
20 communication channels principally used. For example, reaching low to moderate
21 income customers often requires local community outreach and partnerships to
22 raise awareness and encourage participation. A key goal of the DSM plan proposed
23 in this proceeding is to better reach these underserved customer groups going

1 forward. Similarly, reaching small businesses requires a direct, hands-on approach
2 as well.

3 **Q. HOW HAVE CHANGES IN LIGHTING AND APPLIANCE EFFICIENCY**
4 **STANDARDS AND EXPECTATIONS IN THE NEW CONSTRUCTION**
5 **MARKETS INFLUENCED THIS CURRENT PLAN?**

6 A. Federal lighting and appliance efficiency standards are far higher than they
7 were when current DSM plans were proposed. Building codes are now much
8 stricter. In response, plans have been modified to reflect higher efficiency baselines
9 and a narrower set of cost-effective measures since initial program implementation.
10 The incremental costs involved in exceeding already high efficiency standards is
11 typically higher than when standards were lower. For that reason, incentive levels
12 have been increased to the extent justified and where cost-effective energy
13 efficiency gains can still be achieved.

14 **Q. DOES THE COMPANY PROPOSE TO ELIMINATE ANY PROGRAMS**
15 **THAT ARE CURRENTLY IN PLACE?**

16 A. No, the current programs are being expanded or modified with two new
17 programs added to the portfolio. The new programs are the Residential Multifamily
18 program and the Municipal LED Lighting program, both of which are discussed in
19 more detail below.

20 **Q. PLEASE LIST THE DSM PROGRAMS THAT THE COMPANY PROPOSES**
21 **TO PROVIDE UNDER THIS PLAN.**

A. The Company currently proposes to provide seven residential and three commercial and industrial DSM programs going forward:²

Residential Programs

- Residential Neighborhood Energy Efficiency
- Residential Multifamily
- Residential Appliance Recycling
- Residential Heating & Cooling
- Residential Home Energy Check-Up
- Residential Home Energy Reports
- Residential EnergyWise Savings Store (Online Store)

Commercial and Industrial Programs

- Commercial Small Business Direct Install
- Commercial and Industrial EnergyWise for your Business
- Municipal LED Lighting

THE NEIGHBORHOOD ENERGY EFFICIENCY PROGRAM

Q. PLEASE DESCRIBE THE RESIDENTIAL NEIGHBORHOOD ENERGY EFFICIENCY PROGRAM.

A. The Residential Neighborhood Energy Efficiency program (“NEEP”) was introduced in 2013, specifically targeting low to moderate income communities. Through PY8, nearly 11,000 homes have participated in NEEP, saving customers 12,177 megawatt hours (“mWh”) of energy usage, with \$4.5 million invested in the program. Customer benefits in the form of energy savings have been, on average, 1,100 kilowatt hours (“kWh”) per participating customer per year, with installation measures valued at, on average, \$434. For mobile home customers, customer

² The programs identified in this testimony are identified by descriptive functional names. For marketing purposes, however, these programs may be identified by different names when the programs are rolled out to DESC’s customers.

1 benefits in the form of energy savings have been, on average, 1,880 kWh per year,
2 with installation measures valued at, on average, \$3,000.

3 Based on the demonstrated success of this approach, DESC proposes to
4 increase the annual number of neighborhood sweeps with the goal of expanding
5 participation in the program by approximately 45% over the next five years.

6 **Q. HOW IS THE NEEP PROGRAM DELIVERED?**

7 A. Specifically, a neighborhood sweep (which, in some cases, may involve a
8 small town or rural community) begins with a kickoff event at a local church,
9 school, or public facility. The event is well-publicized in advance. Local elected
10 officials and community leaders are invited to participate in the kickoff event.
11 Their words and presence signal approval of the program, which is helpful in
12 achieving good customer participation.

13 At the kickoff, customers may make appointments for energy visits, and
14 specific dates are announced for the sweep. Door hangers and other print collateral
15 are distributed within the neighborhood confirming the dates. On the designated
16 days, energy consultants go door-to-door offering eligible customers the direct
17 installation of LEDs, HVAC filters, low-flow kitchen faucet aerators, advanced
18 power strips, and water heater blankets, as well as water heater turn down and other
19 appropriate measures. For targeted mobile home customers, additional
20 weatherization measures may include air sealing, thermostat upgrade, duct sealing,
21 reflective roof coating and belly board insulation specific to this housing type.
22 These measures are all provided at no cost to the customers. Typically, sweeps are
23 made until 70% of eligible customers have been reached or until three sweeps of

1 the neighborhood have been conducted. Door hangers are left for absent residents
2 indicating the date of a follow up sweep.

3 **Q. PLEASE EXPLAIN ANY PROPOSED CHANGES TO THE RESIDENTIAL**
4 **NEIGHBORHOOD ENERGY EFFICIENCY PROGRAM.**

5 A. DESC does not plan to change the program itself but plans to prioritize this
6 program by expanding funding and resources. The program was implemented in
7 2013. The approach has benefitted from more than six years of experience and is
8 now well-tested.

9 ***THE RESIDENTIAL MULTIFAMILY PROGRAM***

10 **Q. PLEASE DESCRIBE THE RESIDENTIAL MULTIFAMILY PROGRAM.**

11 A. About 20% of DESC's customers are rental customers living in multifamily
12 housing, and approximately 30% of these customers are considered low-income
13 customers. Experience has shown renters to be a difficult customer group to reach
14 since often the person paying the utility bill is not the owner or manager of the
15 residence.

16 The newly proposed Residential Multifamily program seeks to align
17 property owners and managers with tenants in a single program. It does so by
18 offering highly discounted energy efficiency upgrades to property owners in
19 exchange for building-wide participation in the program. For buildings that
20 participate in the program, tenants can receive an energy consultation and direct
21 install of LED lights and low-flow kitchen faucet aerators and showerheads at no
22 cost. Building owners and managers receive incentives of 75% of the cost for
23 qualifying high efficiency common area lighting and HVAC upgrades. This is a

1 new program, and its scope may be expanded based on the results achieved in the
2 initial years.

3 ***THE RESIDENTIAL APPLIANCE RECYCLING PROGRAM***

4 **Q. PLEASE DESCRIBE THE RESIDENTIAL APPLIANCE RECYCLING**
5 **PROGRAM.**

6 A. The Residential Appliance Recycling program has been successful in
7 permanently removing from service older, less efficient but still operable secondary
8 refrigerators, and/or stand-alone freezers. Through PY8, over 10,000 units have
9 been collected, resulting in approximately 6,888 mWh of energy usage saved.
10 Under this program, DESC collects and recycles these appliances at no charge
11 while providing direct payments to customers of \$50 for a qualifying refrigerator
12 or freezer.

13 **Q. PLEASE EXPLAIN ANY PROPOSED CHANGES TO THE RESIDENTIAL**
14 **APPLIANCE RECYCLING PROGRAM.**

15 A. DESC does not propose any changes to this program other than increasing
16 participation in it. From time to time DESC has made limited-time offers of
17 increased incentives and prize packages to motivate participation. DESC may do
18 so in the future, as circumstances warrant.

19 ***THE RESIDENTIAL HEATING & COOLING PROGRAM***

20 **Q. PLEASE DESCRIBE THE RESIDENTIAL HEATING & COOLING**
21 **PROGRAM.**

22 A. The Residential Heating & Cooling program has been successful in
23 motivating customers to invest in high-efficiency heating and cooling equipment.

1 Since the inception of the program, over 48,000 heating and cooling units, water
2 heaters, and/or duct work measures have been incentivized. Customers have
3 received over \$12 million in rebates following participation in the program
4 resulting in net energy savings of more than 37,500 mWh of energy savings since
5 PY1. In addition to direct marketing to customers, the program has been promoted
6 through independent HVAC and plumbing contractors who are trained in program
7 eligibility requirements and on how to assist customers in the application process.

8 **Q. PLEASE EXPLAIN ANY PROPOSED CHANGES TO THE RESIDENTIAL**
9 **HEATING & COOLING PROGRAM.**

10 A. The program will continue to provide incentives for replacement of existing
11 units with qualifying appliances that meet or exceed EPA ENERGY STAR®
12 standards. DESC proposes expanding the program to include incentives for the
13 replacement of electric resistance heating with air source heat pumps and the
14 addition of heat pump water heaters. Because of the cost involved in exceeding
15 current efficiency standards, DESC proposed to increase almost all of the rebates
16 currently being offered, as shown in Table 2.

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Table 2. Residential Heating & Cooling Program Proposed Rebates

Residential Heating & Cooling Program		
Measure Description	Current Rebates	Proposed Unit Incentive
High-Efficiency Heat Pump or Central A/C Tier 1 (15-15.99 SEER)	\$300	\$400 ~33% increase
High-Efficiency Heat Pump or Central A/C Tier 2 (16-16.99 SEER)	\$500	\$500 -
High-Efficiency Heat Pump or Central A/C Tier 3 (17-17.99 SEER)	\$500	\$600 ~20% increase
Air Source Heat Pump replacing Electric Resistance Heat Tier 1	\$300	\$550 ~83% increase
Air Source Heat Pump replacing Electric Resistance Heat Tier 2	\$500	\$650 ~30% increase
Air Source Heat Pump replacing Electric Resistance Heat Tier 3	\$500	\$750 ~40% increase
Air Source Heat Pump replacing Electric Resistance Heat Tier 4 (18 SEER and above)	\$500	\$875 ~75% increase
Duct Sealing	\$150	\$300 ~100% increase
Electric Heat Pump Water Heater (HPWH)	Unavailable now	\$750 new offering

THE RESIDENTIAL HOME ENERGY CHECK-UP PROGRAM

Q. PLEASE DESCRIBE THE RESIDENTIAL HOME ENERGY CHECK-UP PROGRAM.

A. The Residential Home Energy Check-up program has been successful in encouraging over 21,500 homeowners and renters to undertake assessments of energy consumption at their residence. DESC energy experts schedule visits to the residences where they conduct a visual energy efficiency inspection and review

1 with the customers up to two years of their consumption data and weather impacts.
 2 The experts identify likely sources of high energy use and provide customers with
 3 a list of various low- and no-cost energy saving recommendations and tips (e.g.,
 4 thermostat settings, caulking/weather-stripping around doors and windows,
 5 changing air filters, or adjusting water heater settings). Through PY8, the program
 6 has resulted in an average energy savings of \$609 per kWh per customer who has
 7 participated.

8 **Q. PLEASE EXPLAIN ANY PROPOSED CHANGES TO THE RESIDENTIAL**
 9 **HOME ENERGY CHECK-UP PROGRAM.**

10 A. During the check-up visit, participants in the current program are provided
 11 with “Tier 1” measures – LED lighting, low-flow kitchen faucet aerators, water
 12 heater wraps and pipe insulation, as appropriate. However, as LED lighting
 13 becomes standard, additional measures are needed for the program to remain cost
 14 effective and attractive to customers. In response, DESC proposes to add low-flow
 15 showerheads to the “Tier 1” measures and a new set of “Tier 2” measures as listed
 16 below for customers identified as requiring these measures:

- 17 • Tier 1 Measures
 - 18 ○ Home consultation – 100% of cost
 - 19 ○ LEDs – 100% of cost
 - 20 ○ Low-flow kitchen faucet aerators – 100% of cost
 - 21 ○ Water heater wrap – 100% of cost
 - 22 ○ Pipe insulation – 100% of cost
 - 23 ○ Low-flow showerheads – 100% of cost (new measure)
- 24 • Tier 2 Measures
 - 25 ○ Air sealing – Up to 75% of cost
 - 26 ○ Home insulation – Up to 75% of cost
 - 27 ○ Miscellaneous home shell measures – Up to 75% of cost
 - 28

1 “Tier 2” measures will be offered through independent contractors
2 following participation in the “Tier 1” measures of the Home Energy Check-up
3 program. The additional “Tier 2” measures are estimated to result in energy savings
4 that are approximately three times the amount of savings achieved in PY7. The
5 program forecasts to increase participation by approximately five to ten percent
6 over the next five years.

7 ***THE RESIDENTIAL HOME ENERGY REPORTS PROGRAM***

8 **Q. PLEASE DESCRIBE THE RESIDENTIAL HOME ENERGY REPORTS**
9 **PROGRAM.**

10 A. The Residential Home Energy Reports program has been successful in
11 motivating and engaging customers to adopt energy efficiency measures and
12 behaviors by providing them with advanced energy usage benchmarking,
13 educational resources and follow up reminders. More than 37,000 residential
14 customers have opted in to receive monthly/bimonthly energy reports through this
15 program, resulting in an average annual savings of 231 kWh per customer, or
16 66,000 mWh of energy saved in total since the inception of the program. Upon
17 completing a questionnaire about their home (appliance type and number, age of
18 home, square footage, etc.), customers set an energy savings goal.

19 The reports provided under the program compare a customer’s energy usage
20 against a peer group of similar homes. The reports also compare a customer’s
21 current usage to the customer’s historic usage and provide recommendations on
22 how to improve energy efficiency. To further increase engagement, customers have

1 access to a portal that provides a deeper dive into energy efficiency measures that
2 could apply to their home.

3 **Q. PLEASE EXPLAIN THE PROPOSED CHANGES TO THE RESIDENTIAL**
4 **HOME ENERGY REPORTS PROGRAM.**

5 A. DESC proposes to convert the program from an opt-in program, where
6 customers choose to receive the benchmarking report, to an opt-out program, where
7 customers will be notified that they have been selected to receive reports.
8 Customers must then affirmatively choose not to receive reports. Initially, the
9 program will target the top quartile of residential customers by consumption. The
10 customers chosen will be those whose usage patterns indicate a strong potential to
11 reduce their energy consumption and their bills. Customers who are not selected
12 for participation but who wish to opt-in to the program will still have the
13 opportunity to do so. By the end of PY14, it is estimated that over 87,000 customers
14 will be participating in the newly designed program with a program cost of
15 approximately \$3.8 million over the five-year period.

16 ***THE RESIDENTIAL ENERGYWISE SAVINGS STORE (ONLINE STORE)***

17 **Q. PLEASE DESCRIBE THE RESIDENTIAL ENERGYWISE SAVINGS**
18 **STORE (ONLINE STORE).**

19 A. The Residential EnergyWise Savings Store (Online Store) has successfully
20 incentivized the purchase of discounted home energy efficiency products for
21 residential customers. Since 2015, through both online and other channels, over
22 550,000 home energy efficiency products have been sold or distributed resulting in
23 37,884 mWh in energy savings. As the program is currently configured, the

1 products ordered from the store must be shipped to a valid customer address within
 2 the DESC service territory. Quantities are limited per account consistent with
 3 EM&V recommendations.

4 **Q. PLEASE EXPLAIN THE PROPOSED CHANGES TO THE RESIDENTIAL**
 5 **ONLINE STORE.**

6 A. DESC will continue to provide subsidized LED bulbs and proposes to
 7 expand the products offered to include smart thermostats. The expanded list of
 8 qualifying equipment and estimated per unit planned incentives will initially
 9 include:

- 10 • LED bulbs (standard) – Up to \$3
- 11 • LED bulbs (specialty) – Up to \$6
- 12 • LED bulbs (connected) – Up to \$10
- 13 • Low-flow kitchen faucet aerators – Up to \$5
- 14 • Low-flow showerheads – Up to \$10
- 15 • Advanced power strips – Up to \$20
- 16 • Smart thermostats – Up to \$75 (new measure)

17
 18 ***THE COMMERCIAL SMALL BUSINESS DIRECT INSTALL PROGRAM***

19 **Q. PLEASE DESCRIBE THE COMMERCIAL SMALL BUSINESS DIRECT**
 20 **INSTALL PROGRAM.**

21 A. The Commercial Small Business Direct Install program incentivizes small
 22 businesses to replace functioning but inefficient equipment, principally lighting and
 23 refrigeration equipment (such as coolers and freezers), with more up-to-date energy
 24 efficient alternatives. To date, it has resulted in small businesses undertaking over
 25 1,750 energy efficiency projects. Businesses qualify if they use 350,000 kWh per
 26 year or less of energy and have five accounts or fewer. Since the inception of the
 27 program, DESC has invested approximately \$6.9 million in the program, with 76%

1 of the investment being used for direct incentives paid to commercial customers.
2 These efforts have resulted in 17,513 mWh in energy savings.

3 DESC plans to expand the resources committed to this program to focus
4 more intensively on small businesses located in rural areas or small towns. These
5 businesses tend to have very busy owners and managers with limited energy
6 efficiency experience. Like low to moderate income customers, they often require
7 a personal, or face-to-face communication to encourage them to participate in
8 energy efficiency programs. The proposed plan will increase our efforts to reach
9 these customers. DESC has recently begun coordinating the small business
10 program with the NEEP program, where possible, so that while NEEP energy
11 consultants are making a sweep through a town or low to moderate income
12 community, Small Business Direct Install representatives are also working to
13 identify qualifying nonresidential customers in the same area.

14 DESC proposes to continue to administer the program in its current form
15 but plans to expand participation in the program by approximately 75% in the next
16 five years.

17 **Q. HOW IS THE PROGRAM ADMINISTERED?**

18 A. Customers who participate in the program receive a free energy analysis
19 completed onsite by a trained energy efficiency auditor and receive a review of the
20 lighting and refrigeration measures they could adopt. If replacement of inefficient
21 or outdated lighting or refrigeration equipment is indicated, the customer is offered
22 direct installation of new, high efficiency equipment by subcontractors. Local
23 contractors are then retained to perform the installations.

1 Current incentives cover up to 80% of the total cost of equipment and
2 installation (capped at \$6,000 per account) for lighting and refrigeration measures.

3 To further increase participation, DESC intends to increase the maximum incentive
4 for equipment upgrades from 80% to 90%.

5 ***THE COMMERCIAL AND INDUSTRIAL ENERGYWISE FOR YOUR BUSINESS***
6 ***PROGRAM***

7 **Q. PLEASE DESCRIBE THE COMMERCIAL AND INDUSTRIAL**
8 **ENERGYWISE FOR YOUR BUSINESS PROGRAM.**

9 A. The Commercial and Industrial EnergyWise for Your Business Program has
10 been successful in increasing energy efficiency in commercial and industrial
11 facilities through incentives and technical assistance. Over 5,100 projects have
12 received incentives, which exceed \$27 million and have saved customers 213,129
13 mWh of energy consumption.

14 The program is divided into a prescriptive path, which lists the incentives
15 for specific equipment upgrades, and a custom path, which ties incentives to the
16 specific incremental efficiency benefits of the customer's proposed plan and allows
17 customers the ability to create "custom" rebates to fit their individual needs. DESC
18 will continue to provide technical assistance to customers under both programs.

19 The prescriptive aspect of the EnergyWise for Your Business Program
20 provides financial incentives according to a published schedule as shown in Table

21 3.
22
23
24

Table 3. EnergyWise for Your Business Program Proposed Incentives

EnergyWise for Your Business	
Measure Description	Per Unit Incentive
Lighting	
Fixture replacements or upgrades	\$0.35 per watt reduced; up to 50% of project cost
Complete lighting design for new construction	\$0.40 per watt reduced
HVAC	
HVAC Variable Frequency Drive	\$50 per horsepower
HVAC Chillers	\$10 – \$30 per ton
Water and evaporative or unitary and unmatched split AC and HP Systems	\$15 – \$75 per ton
PTAC and PTHP Systems	\$20 – \$35 per ton
Food Service	
High-Efficiency Food Preparation Equipment	\$300 – \$1,000 per unit
High-Efficiency ice makers, clothes washers, or reach-in coolers	\$20 – \$150 per unit
Custom	
Labor and material/equipment costs for retrofit	Up to 50%
Incremental material/equipment for new construction/major renovation	Up to 75%

Q. PLEASE EXPLAIN ANY PROPOSED CHANGES TO THE COMMERCIAL AND INDUSTRIAL ENERGYWISE FOR YOUR BUSINESS PROGRAM.

A. DESC proposes to add a new agricultural component to the prescriptive path of the program. This new component will focus on targeting agricultural customers such as dairy, poultry and swine farms by providing lighting, pumping, ventilation, irrigation and other energy efficiency measures specific to their business.

DESC further proposes to add a Strategic Energy Management component to provide energy management tools, coaching, and additional technical resources

1 for commercial and industrial customers. Larger industrial or commercial facilities
2 typically have trained energy managers on staff who work to identify and promote
3 energy efficiency projects within the plants or facilities and manage their
4 implementation. Smaller industrial and commercial customers often lack dedicated
5 energy managers, and that makes it difficult for them to partner with us to take
6 advantage of the programs that are available.

7 The proposal here is to fill this gap through coaching and training of
8 customer personnel so that they can become energy efficiency advocates and
9 implementers within their organization. This training will involve a year-long
10 series of workshops and one-on-one coaching for facility managers for participating
11 customers. The goal is to educate businesses, especially mid-market industrial or
12 commercial businesses, on how to identify and implement organizational
13 structures, behavior changes, and systematic practices that can lead to significant
14 energy and cost savings. It will be tied to increased outreach and communication
15 to this market segment.

16 ***THE NEW MUNICIPAL LED LIGHTING PROGRAM***

17 **Q. PLEASE DESCRIBE THE NEW MUNICIPAL LED LIGHTING**
18 **PROGRAM.**

19 A. DESC proposes to offer a new Municipal LED Lighting program
20 specifically targeted to municipalities to encourage the replacement of older,
21 inefficient streetlights with high-efficiency LED streetlights. Incentives will create
22 a financially neutral option for municipalities to participate in the program by
23 offering bill credits that will reduce the cost of the high-efficiency LED lights over

1 a period of five years to a level equal to or less than the cost of continuing with the
2 existing, less efficient halide lighting. This offering will encourage the installation
3 of high efficiency fixtures because it will allow them to be installed at no net
4 additional cost to municipal lighting customers.

5 The proposed program targets replacing approximately 54,000 non-LED
6 fixtures across the system for an initial target of 15 to 17 municipalities over the
7 next three to five years. The program is expected to reduce energy consumption by
8 19,070 mWh and provide incentives exceeding \$14 million. In addition to energy
9 efficiency, the new fixtures also provide better remote monitoring, higher quality
10 lighting, and automated outage communications and lighting control, thus resulting
11 in overall improved customer service for municipalities.

12 **OPT-OUT PROVISION**

13 **Q. PLEASE DESCRIBE THE MECHANISM FOR ALLOWING CERTAIN**
14 **CUSTOMERS TO OPT OUT OF THE DSM PROGRAM AND**
15 **CORRESPONDING DSM RIDER TO RETAIL RATES.**

16 A. As is more fully explained by Company Witness Rooks, DESC intends to
17 continue, with one revision, the option by which certain commercial and industrial
18 customers may opt out of its DSM programs. DESC proposes to modify the opt-
19 out provision to require three years of participation in the rate rider should a
20 customer elect to participate in one of the Company's DSM programs before
21 deciding to opt out. This matches the proposed three-year term for recovery of
22 DSM Program costs under the Rate Rider.
23

FIVE-YEAR PROGRAM

Q. WHAT IS THE COMPANY REQUESTING CONCERNING THE PROGRAM TERM?

A. The Company is requesting the ability to operate these programs over a five-year term. During that term, we would continue to monitor the results of the programs and would retain the right to modify or discontinue programs as market conditions indicated. But in the interest of stability and predictability, we ask the Commission to rule, as it has in past dockets, that no other party could file to force a change in this suite of DSM programs during an initial five-year term. In this case, we request a term of five years, which is consistent with the planning horizon under which the programs have been formulated and their ability to provide benefits to customers has been measured. An effective and efficient DSM program requires stability. The Company asks for the five-year term to provide the necessary stability.

OVERVIEW OF THE COST RECOVERY & INCENTIVE PROPOSAL

Q. PLEASE PROVIDE AN OVERVIEW OF THE COMPANY'S PROPOSED RIDER FOR THE RECOVERY OF DSM EXPENSES, NET LOST MARGIN REVENUE, AND THE INCENTIVE RETURN.

A. DESC is proposing to continue the cost recovery, net lost margin revenue, and shared savings mechanisms presently in effect under the existing authorization and rate rider, with certain changes, which Company Witness Rooks will describe in detail in his testimony.

CONCLUSION

Q. PLEASE SUMMARIZE YOUR CONCLUSIONS REGARDING THE DSM PROGRAMS PROPOSED HERE.

A. The DSM programs proposed in this proceeding provide benefits to customers in all customer classes and provide a broad range of measures to support energy efficiency. Each of these programs will be coupled with a specific marketing plan that will further increase customer awareness of the importance of energy efficiency and add to the educational value of the portfolio of programs as a whole. The existing programs are being modified and expanded to reach customers in groups that have proved difficult to reach in the past, target existing homes and focus on small business customers. Modifications are also being proposed to reflect increasingly strict energy efficiency standards and codes and increased costs of achieving incremental energy efficiency benefits under those standards. New programs are being provided for subgroups like multifamily customers, municipalities and a new offering for agricultural customers.

DESC has determined that this proposal represents a balanced suite of DSM programs that are reasonably practicable for the Company to implement; are likely to be well received by customers; are technically and economically justified; and have a reasonable likelihood of providing significant net savings to customers and the system.

Q. DID THE COMPANY ANALYZE THE PROJECTED NET SAVINGS IMPACT, PROGRAM COSTS, AND COST EFFECTIVENESS RESULTS FOR THESE PROPOSED DSM PROGRAMS?

1 A. Yes. As Company Witness Pickles testifies, each of the programs has been
2 carefully analyzed to show that it is likely to provide sufficient benefits to customers
3 to justify its cost. All of the proposed programs are cost effective under the TRC
4 test.

5 **Table 4. Summary of Program Impacts**
6

Program	TRC	Sum of Incremental for Program Years 10–14				
		Non-Incentive \$	Incentive \$	Total \$	mWh	MW
Appliance Recycling	1.11	\$2,547,062	\$2,425,774	\$4,972,836	14,149	1.7
H&C and Water Heating	1.02	\$3,386,440	\$11,702,348	\$15,088,788	27,271	13.5
Home Energy Check-up	1.00	\$6,808,468	\$9,015,591	\$15,824,059	27,406	6.1
Home Energy Reports	1.88	\$895,740	\$3,847,221	\$4,742,962	24,473	9.3
Neighborhood Energy Efficiency	5.90	\$969,974	\$3,730,671	\$4,700,645	24,439	2.8
Online Store	8.15	\$345,799	\$1,533,467	\$1,879,266	19,799	1.7
Multifamily	1.76	\$1,527,150	\$3,442,875	\$4,970,025	18,627	2.9
Residential Portfolio	1.84	\$16,480,633	\$35,697,946	\$52,178,580	156,164	37.8
EnergyWise for Your Business	1.84	\$18,672,720	\$35,828,135	\$54,500,855	252,196	57.1
Small Business Direct Install	1.91	\$4,910,887	\$8,184,812	\$13,095,699	71,541	20.6
Municipal LED Lighting	2.37	\$5,035,877	\$14,957,202	\$19,993,079	19,070	–
C&I Portfolio	1.89	\$28,619,484	\$58,970,149	\$87,589,633	342,807	77.7
Total Portfolio	1.88	\$45,100,117	\$94,668,095	\$139,768,212	498,971	115.5

7
8 **Q. WHAT ARE YOU ASKING THE COMMISSION TO DO IN THIS**
9 **PROCEEDING?**

10 A. The Company respectfully requests that the Commission approve
11 continuation of the DSM program offerings as set forth for a five-year term, with

1 DESC being authorized to modify, amend, terminate or add any measure or
2 program to its suite of programs at any time without the requirement of seeking
3 prior Commission approval.

4 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

5 A. Yes, it does.

6